

Notice of Allowability

Application No.

10/673,864

Examiner

Hashem Farrokh

Applicant(s)

HAASE ET AL.

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to 1/20/06.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

PART I **THE EXAMINER'S EVALUATION OF THE APPLICATION**

SECTION A **RELEVANT ART CITED BY THE EXAMINER**

1. U. S. Patent No. 5,742,792 to Yanai et al. describes Remote data mirroring.
2. U. S. Patent No. 6,910,111 B1 to Colgrove et al. describes Volume restoration using an accumulator map.
3. U. S. Patent No. 6,532,551 B1 to Kamei et al. describes Data management method for backup memory.

SECTION B **DISTINGUISHING FEATURES RECITED IN THE CLAIMS**

The following is an Examiner's Statement of Reasons for Allowance See **MPEP 1302.14**

1. The primary reason for allowance of claims 1-7,8-14, and 15-21 in instant application is the combination with the inclusion of following limitations: creating a persistent map denominated as a persistent clone delta map to track extents of the clone that may be different between the clone and the source; in response to an interruption of a restore operation of the source, using the persistent protected restore map and the persistent clone delta map to resume the restore operation that had been interrupted by determining whether corresponding bits in the delta map are set and corresponding bit in the persistent protected restore map are not set.

The prior art of record including the disclosures of Yanai et al. (5,742,792), Colgrove et al. (6,910,111 B1), and Kamei et al. (6,532,551 B1) neither anticipates nor renders obvious the above-recited combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays should be clearly labeled "Comments on Statement of Reasons for Allowance"

PART II THE ATTENTION OF FUTURE CORRESPONDENT

*Any inquiry concerning this communication should be directed to Hashem Farrokh whose telephone number is (571) 272-4193. The examiner can normally be reached Monday-Friday from **8:00 AM to 5:00 PM**.*

:IMPORTANT NOTE:

If attempt to reach the above noted Examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Donald A Sparks, can be reached on (571) 272-4201.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

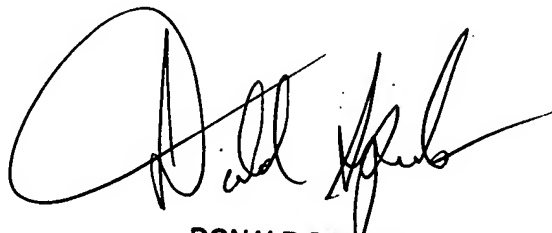
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access to the Private PAIR system, contact the Electronic Business Center (EBS) at
866-217-9197 (toll-free).

HF

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2006-03-15

A handwritten signature in black ink, appearing to read 'Donald Sparks', written over a horizontal line.

DONALD SPARKS
SUPERVISORY PATENT EXAMINER